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Repetophragma verrucosum sp. nov. from China

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Abstract—A new anamorphic species, *Repetophragma verrucosum*, is described and illustrated from specimens collected on decaying branches in China. This fungus is distinguished by monoblastic and annellidic conidiogenous cells that produce fusiform to subobclavate, 3-euseptate, verrucose, and yellowish brown conidia.

Key words—hyphomycete, taxonomy, microfungi

Introduction

The vegetation in China is composed of a great variety of evergreen and deciduous broadleaf forests where many different kinds of wood-inhabiting fungi have been recently discovered (e.g., Ma & al. 2016a,b, 2018). During our ongoing study of anamorphic fungi from this region, we collected a species with morphological characters of *Repetophragma* Subram. (Subramanian 1992) from decaying branches. Our specimen, which differed morphologically from previously described *Repetophragma* species, is proposed here as a new species.

The specimens are deposited in the Herbarium of Department of Plant Pathology, Shandong Agricultural University, Taian, Shandong, China (HSAUP) and the Mycological Herbarium, Institute of Microbiology, Chinese Academy of Sciences, Beijing, China (HMAS).

Taxonomy

Repetophragma verrucosum L.G. Ma & X.G. Zhang, **sp. nov.** Fig. 1

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Differs from *Repetophragma dennisii* by its narrower, longer, verrucose conidia; and from *R. laxisporum* by its 3-euseptate, wider, verrucose conidia.

Type: China, Guangdong Province, Liuxihe National Forest Park, on dead branches of an unidentified broadleaf tree, 12 Oct. 2010, L.G. Ma (**Holotype**, HSAUP H7082; **isotype**, HMAS 146165).

Etymology: *verrucosum*, referring to the verrucose conidial wall.

Colonies on the natural substratum effuse, brown to dark brown, hairy. Mycelium partly superficial, partly immersed, composed of septate, pale brown, smooth hyphae, 2.5–3.5 µm diam. Conidiophores macronematous, mononematous, single, unbranched, erect, straight to slightly flexuous, cylindrical, smooth, thick-walled, dark brown to black, brown towards the apex, multiseptate, 190–335 × 6.0–8.5 µm. Conidiogenous cells holoblastic, monoblastic, integrated, terminal, indeterminate, brown, cylindrical, smooth, thick-walled, with numerous annellidic percurrent extensions towards the apex. Conidial secession schizolytic. Conidia acrogenous, solitary, fusiform to subobclavate, thick-walled, yellowish brown, slightly paler at the end cells, straight or slightly curved, verrucose, 3-euseptate, 23–37.5 × 7.5–10.5 µm, 2.5–4.5 µm diam. at the truncate base, rounded or slightly acute at the apex.

Comments—Subramanian (1992) segregated *Repetophragma* with *R. biseptatum* (M.B. Ellis) Subram. as its type species from *Sporidesmium* Link. The genus is diagnosed by macronematous and single conidiophores possessing integrated and terminal conidiogenous cells with annellidic percurrent extensions and solitary and euseptate conidia (Wu & Zhuang 2005, Castañeda & al. 2011). Castañeda & al. (2011) reviewed the genus, proposed a new species and twelve new combinations, and provided a comparative table and a key to 32 accepted *Repetophragma* species. Among three additional species since added are *R. hainanense* Jian Ma & X.G. Zhang and *R. elegans* J.W. Xia & X.G. Zhang, described from China (Ma & al. 2014, Wang & al. 2017).

Repetophragma verrucosum resembles *R. dennisii* (M.B. Ellis) Subram. and *R. laxisporum* (R.F. Castañeda) R.F. Castañeda in conidial shape. However, the conidia of *R. dennisii* are shorter and wider (23–32 × 11–13 µm), smooth, and brown with paler apical cells (Subramanian 1992); and *R. laxisporum*

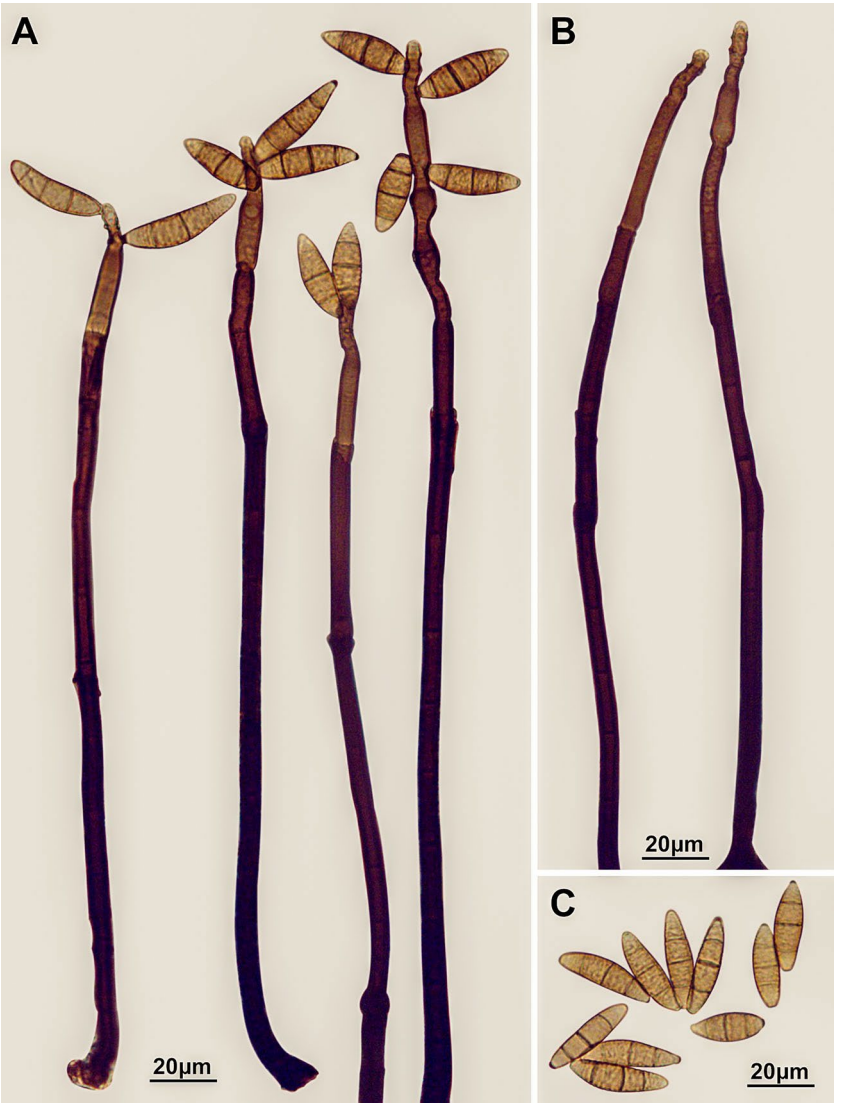

Fig. 1. *Repetophragma verrucosum* (holotype, HSAUP H7082).
A. Conidiophores, conidiogenous cells, and conidia;
B. Conidiophores with conidiogenous cells; C. Conidia.

differs from our species by producing 6–7-septate, slightly narrower (7–9 μm), smooth, brown conidia with subhyaline end cells (Castañeda & al. 2011).

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